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State of the emerging nanotechnology industry in 2013: Challenges and opportunities

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Abstract

Over the past 20 years, nanotechnology has made a significant progress in scientific research and business development. However, a number of challenges still exist, and its potential anticipated from nanoscience research to commercialization is still far from full realization. In this presentation, the author will highlight the state of the emerging nanotechnology industry, its challenges and opportunities.

A seven key-point strategic plan for a safe and beneficial Nanotechnology will be presented and discussed: (a) Fostering collaboration in scientific research and business development in nanotechnology worldwide; (b) Developing of the international nomenclature and standards for various sectors, i.e. nanoelectronics, nanomedicine, cosmetics and other consumer products; (c) Ensuring the safety and quality assurance of nano-manufacturing processes and products; (d) Nurturing nanoscience education starting from high school to university levels, as well as training a new generation of skilled workforce of technicians and nanotechnologists; (e) Providing long-term capital and human resources investment in promising technologies and companies; (f) Outreach to stake-holders and upstream engagement with the public and the community at large, and (g) Focusing on the beneficial applications of nanomaterials and nanoscale process in computer, renewable energy and medicine.

Biography

Lloyd L. Tran is the president of the International Association of Nanotechnology, a non-profit organization to foster research and business collaboration in the emerging nanotechnology. He is the director of Cleantech Institute, a leading research, consulting and training organization in renewable energy. He also serves chairman of Neurobiogen, LLC, focusing on the developing a new drug for treatment of Alzheimer's disease. He has more than 20 years of experience in scientific research in the application of nanotechnology in medicine and clean energy. He has several patents on a nano-membrane controlled release infusion pump, which has been approved for marketing in the USA by the Food and Drug Administration. He is the inventor of a new drug for the treatment of neurological diseases, which is now in clinical trials. He has pending patents on nano battery technology that can be used to power an electric car to 400 miles per single charge.